Solved Connect the MBox on Arduor 5

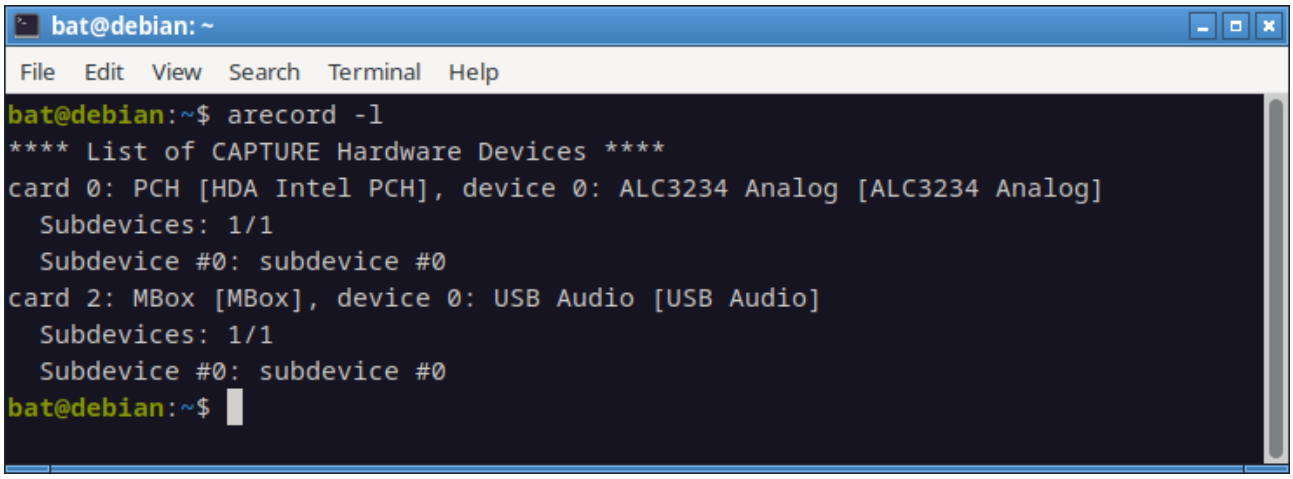
Note that ALSA and JackD must have the same sample rate, in my case Alsa is 48 KHz , hence JackD must be set also at 48 Khz.

MBOX will be set to use JackD and the Ardour output which is working using JackD server will be bridged to ALSA audio interface of the PC.

Identify Audio interfaces

I need to identify the audio interfaces, the Mbox and the PC ones, run the following command:

```
arecord -l
```


bat@debian: ~
File Edit View Search Terminal Help
bat@debian:~$ arecord -l
**** List of CAPTURE Hardware Devices ****
card 0: PCH [HDA Intel PCH], device 0: ALC3234 Analog [ALC3234 Analog]
Subdevices: 1/1
Subdevice #0: subdevice #0
card 2: MBox [MBox], device 0: USB Audio [USB Audio]
Subdevices: 1/1
Subdevice #0: subdevice #0
bat@debian:~$

ALSA device strings follow the pattern `hw:CARD,DEVICE`:

- **Mbox** = card `2`, device `0` → `hw:2,0` (capture side, for JACK's `-d`)
- **Laptop speakers (PCH)** = card `0`, device `0` → `hw:0,0`, which can be shortened to `hw:0` since device `0` is the default when omitted

So `hw:2,0` and `hw:0` aren't arbitrary — they're literally the card/device numbers Linux assigned to your specific hardware, read straight from `arecord -l`/`aplay -l`. If you ever plug in a different USB interface or it enumerates in a different order after a reboot, these numbers can change — always worth re-checking with those two commands if something stops being detected

Start JackD and as Input (Grab Mbox) and set Output to Alsa

Set JackD Mbox as Input. Open a terminal and run:

```
JACK_NO_AUDIO_RESERVATION=1 jackd -d alsa -d hw:2,0 -r 48000 -p 256 -n 2
```

Set PC audio device as output. Open another terminal and run:

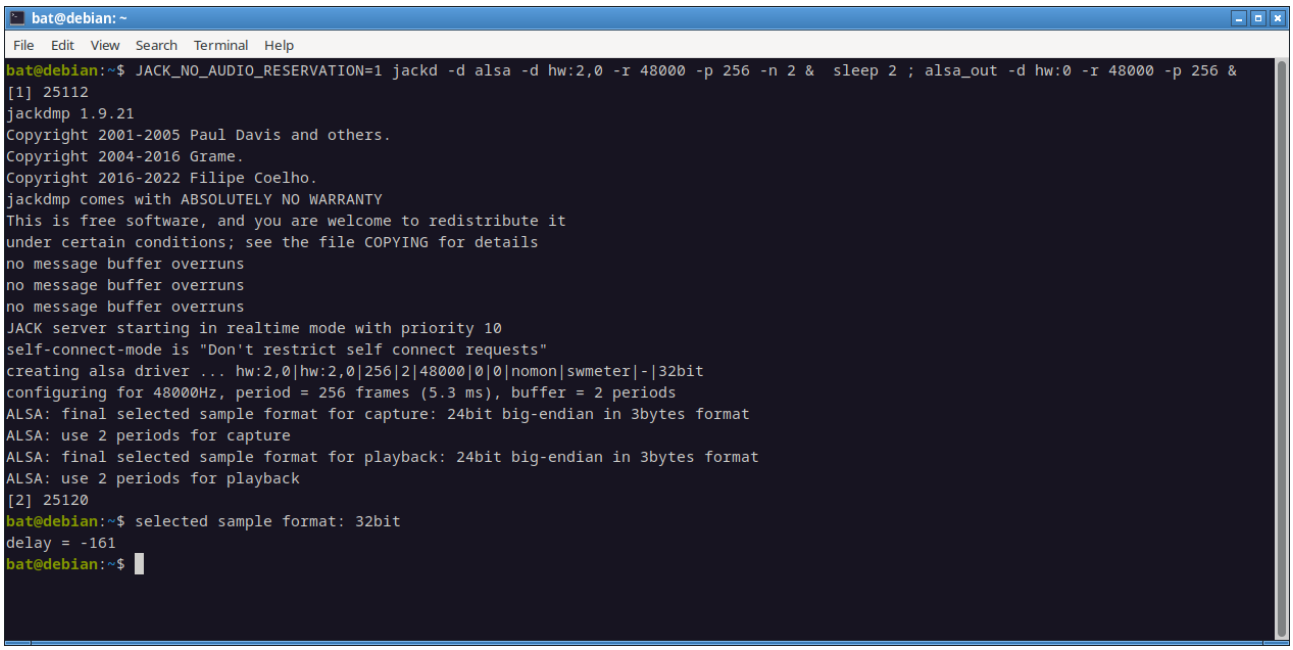
```
alsa_out -d hw:0 -r 48000 -p 256
```

Both commands can be run at once in one script or command line as follows:

```
#!/bin/bash
JACK_NO_AUDIO_RESERVATION=1 jackd -d alsa -d hw:2,0 -r 48000 -p 256 -n 2 &
sleep 2
alsa_out -d hw:0 -r 48000 -p 256 &
```

Or in one line:

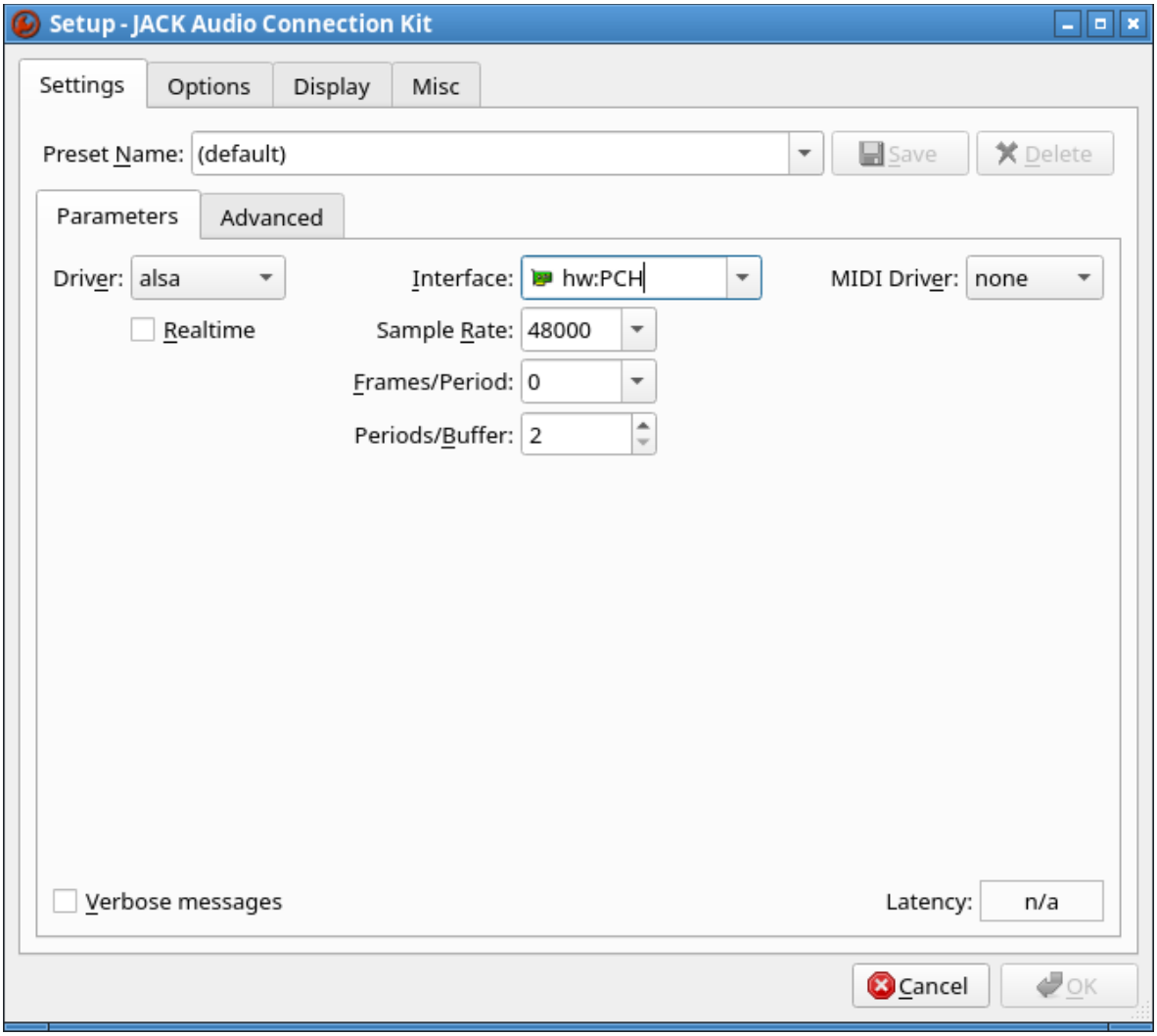
```
JACK_NO_AUDIO_RESERVATION=1 jackd -d alsa -d hw:2,0 -r 48000 -p 256 -n 2 &  sleep 2;
alsa_out -d hw:0 -r 48000 -p 256 &
```


bat@debian: ~
File Edit View Search Terminal Help
bat@debian:~$ JACK_NO_AUDIO_RESERVATION=1 jackd -d alsa -d hw:2,0 -r 48000 -p 256 -n 2 & sleep 2 ; alsa_out -d hw:0 -r 48000 -p 256 &
[1] 25112
jackdmp 1.9.21
Copyright 2001-2005 Paul Davis and others.
Copyright 2004-2016 Grame.
Copyright 2016-2022 Filipe Coelho.
jackdmp comes with ABSOLUTELY NO WARRANTY
This is free software, and you are welcome to redistribute it
under certain conditions; see the file COPYING for details
no message buffer overruns
no message buffer overruns
no message buffer overruns
JACK server starting in realtime mode with priority 10
self-connect-mode is "Don't restrict self connect requests"
creating alsa driver ... hw:2,0|hw:2,0|256|2|48000|0|0|nomon|swmeter|-|32bit
configuring for 48000Hz, period = 256 frames (5.3 ms), buffer = 2 periods
ALSA: final selected sample format for capture: 24bit big-endian in 3bytes format
ALSA: use 2 periods for capture
ALSA: final selected sample format for playback: 24bit big-endian in 3bytes format
ALSA: use 2 periods for playback
[2] 25120
bat@debian:~$ selected sample format: 32bit
delay = -161
bat@debian:~$

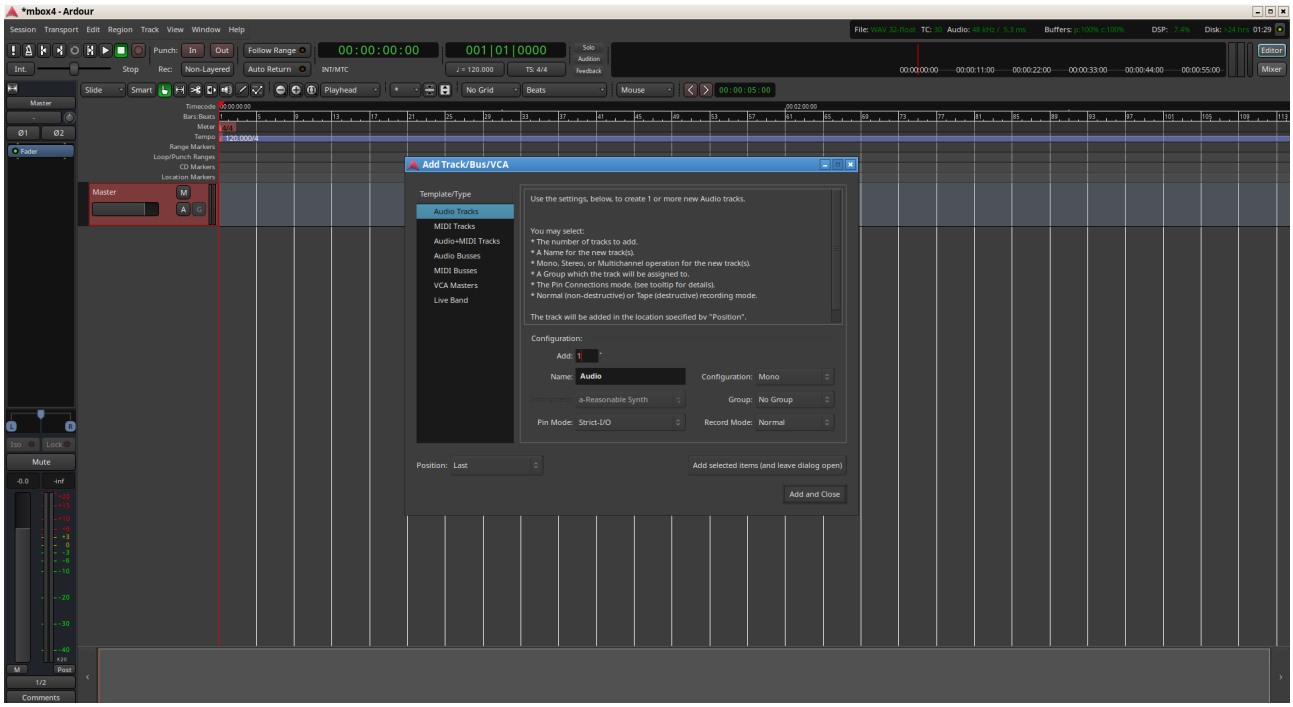
Open QjackCTL

QjacjCTK sgiyd open running as jack server is already running.

Check that QjacCTL is set as a driver Alsa and interface hw:PCH and 48KHz sample rate

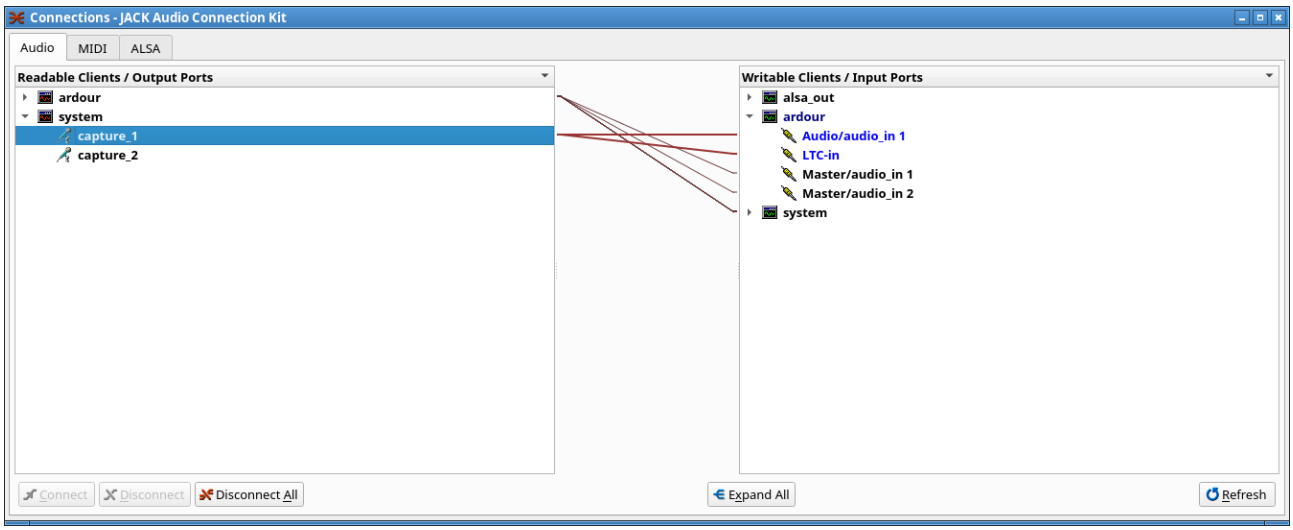


Open Ardour 5 and insert an audio Track



Then Set the Mbox as capture

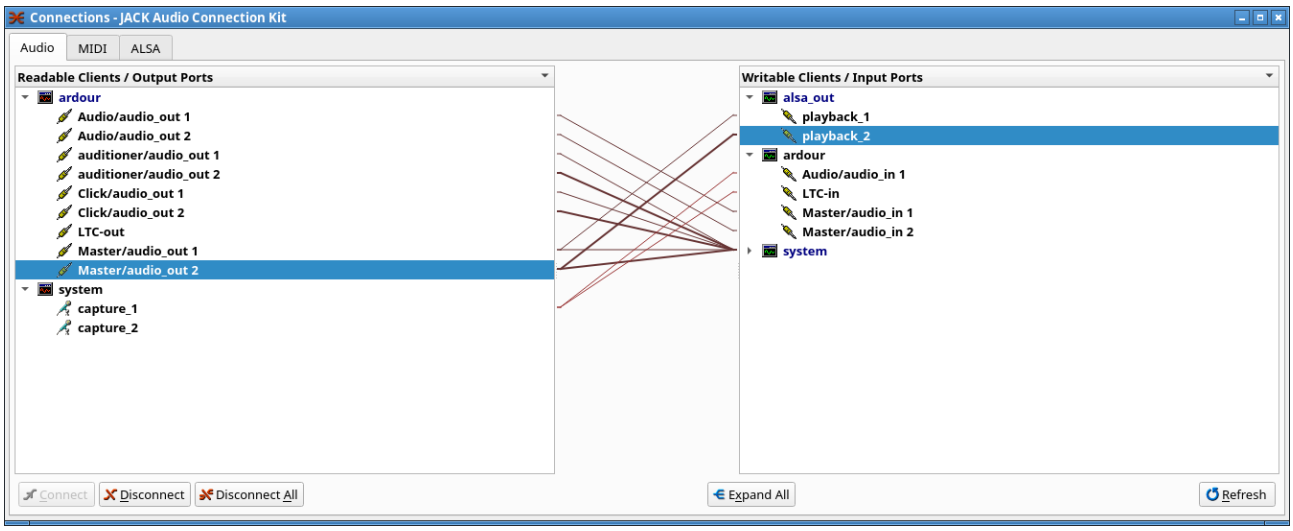
When created the new audio track, the new audio track will create and connect the Mbox (capture_1) to its input. I can check on QjackCTL connections.



The picture shows Capture_1 (MBOX) in connected to the Audio/audio_in 1.

Set the Alsa output

Connect the Arduor's "Master/audio_out 1" and "Master /audio 2" to the "alsa_out" "playback_1 and "playback_2" shown in the picture below:



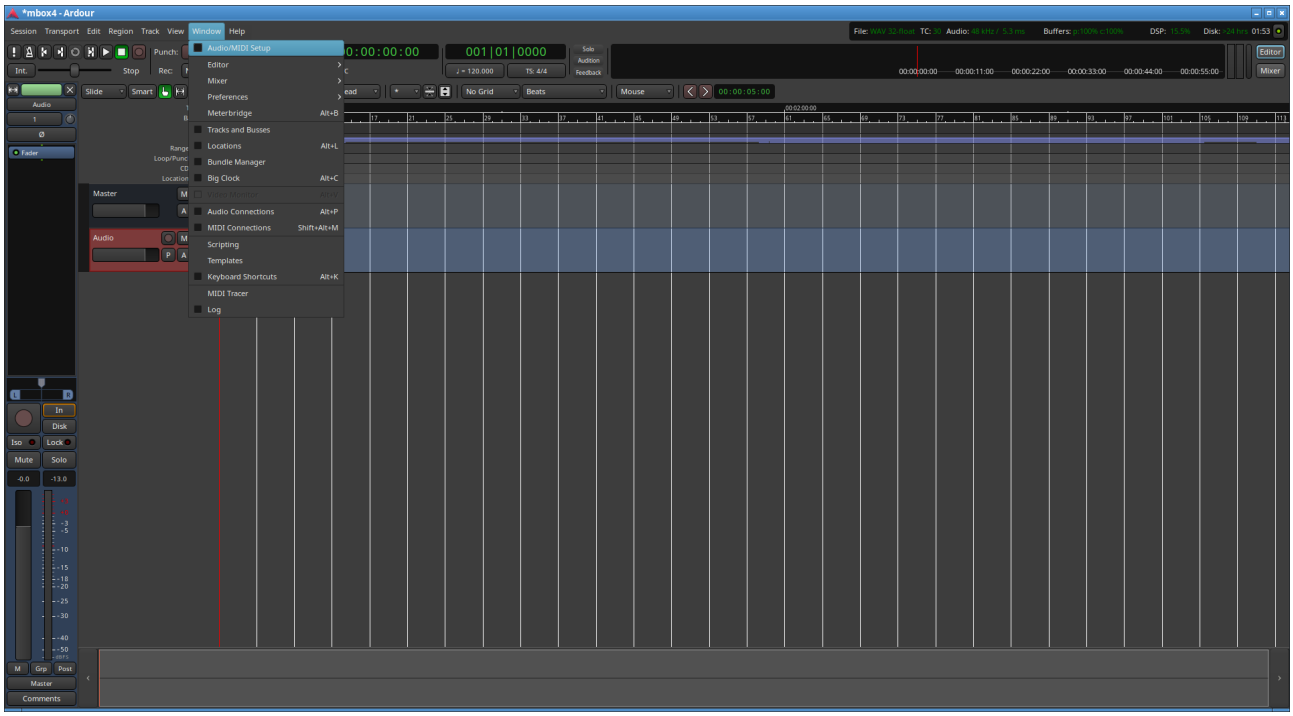
Technically every thing has been set.

Just check the connections using the Connect button on QjackCTL, check that the capture_1 is not connected to the master input as it will produce feedback.

Troubleshooting

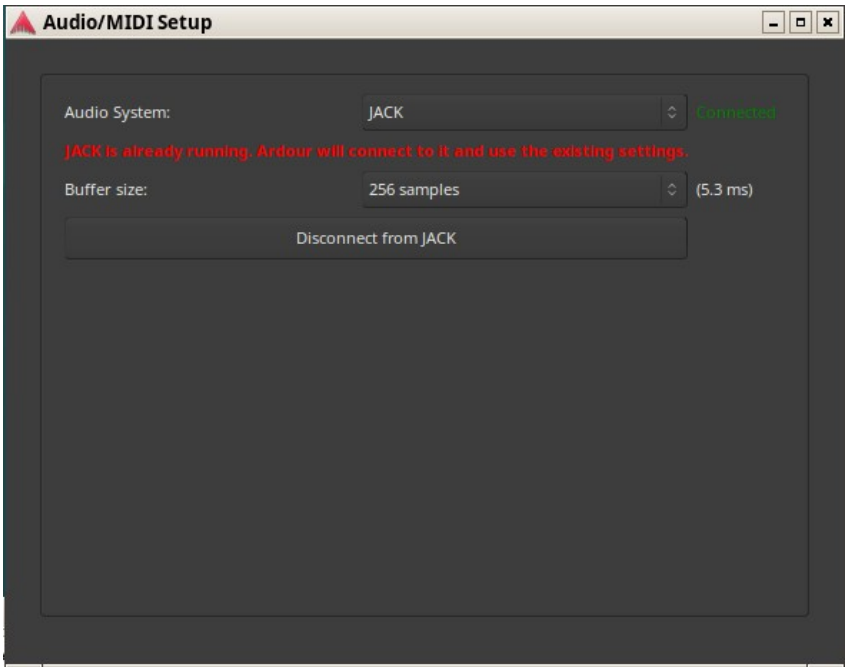
If Ardour does not play, check is Ardour is connected to jackD.

Clcik Window / Audio MidiSetup



And check if JACK is connected.

If Says, Disconnect from JACK means JACKD is running, otherwise click in connect to connect to the JackD server.



If there is no output from speakers, check the connection on QJackCTL

References

See also my documents:

1- Recording_from_Mbox_arecord_ffmpeg_Works.pdf

2- How_To_Record_from_PCM_Debian_12_pulse-Aduio_ffmpeg_Parecord_commands.pdf

3- How to record Live screen in the same what that recording liv e stream from PCN.pdf